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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,673	04/02/2004	Fredrik Nicklasson	PC27889A	9702

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EXAMINER	
LEITH, PATRICIA A	

ART UNIT	PAPER NUMBER
1655	

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/816,673	NICKLASSON ET AL.	
	Examiner	Art Unit	
	Patricia Leith	1655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/27/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-16 are pending in the application.

Election/Restrictions

Applicant's election of the species of soybean oil, sodium carbonate, sucralose, soy lecithin, sodium chloride and titanium dioxidein the reply filed on 10/27/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 1-16 were examined on their merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobsen et al. (US 6,517,864 B1) in view of Girsh (US 5,753,296).

Jacobsen et al. (US 6,517,864 B1) taught a transmucosal delivery agent in combination with tolterodine for treating overactive bladder (see Abstract for example). Specifically, Jacobsen et al. claimed the tolterone R and S isomeric forms, as well as

the tolterodine metabolite (R) –N,N-diisopropyl-3-(20hydroxy-5-hydroxymethylphenyl)-3 phenylpropanamine in combination with topical carriers for oral, sublingual and buccal administration (see Claims 1-36).

Jacobsen et al. did not suggest the incorporation of cocoa powder, a lipid such as cocoa butter, a sweetener or an emulsifier such as lecithin.

Girsh (US 5,753,296) taught chocolate compositions containing hypoallergenic cocoa powder which advantageously included pharmaceutical agents for sublingual/mucosal delivery (see entire reference especially col.2, lines 61-67, col. 14, lines 3-52). In a specific embodiment, Girsh prepares a 'High phosphatidylcholine lecithin, sugar-free, chocolate flavored aspirin' in Example XXVII (col. 28) which comprised aspirin, hypoallergenic cocoa powder, lecithin, vanilla, cocoa butter and maltitol, formed into small units to be "...utilized as a pleasant tasting, high mucosal penetrating and oral absorbable delivery system which is maintained sublingually in the mouth until completely dissolved".

Girsh specifically explains that

> The inventive chocolate composition may be ultilized as a vehicle for delivery of oral medications to **mask drug flavor** and provide for enhanced drug uptake via the oral mucosa. For example, a dosage form may be prepared by coating a medicament with a chocolate coating according to the present invention, or by mixing the medicament in a liquid or powder form with the chocolate

composition. A chewable tablet, e.g., aspirin tablet, may thus be formed. The drug may comprise any pharmaceutical suitable for oral delivery, in particular those drugs such as dihydroergotamine...which are difficult to deliver by the oral route on account of poor absorption... (see col. 14, lines 17-28 – emphisis added).

Although Girsh taught the use of *hypoallergenic* cocoa powder, it was cocoa powder none-the-less in the composition.

One of ordinary skill in the art would have been motivated to incorporate the composition of Jacobsen et al. in to a chocolate wafer as disclosed by Girsh in order to increase intraoral uptake of the tolterodine. Tolterondine was already a well-known pharmaceutical agent known for treating urinary problems. Further well-known were cocoa powder-containing compositions (i.e., 'chocolate tablets') for increasing transmucosal delivery of active ingredients. Therefore, the ordinary artisan would have had a reasonable expectation that the combination of the references would have been an advantageous means of incorporating tolterondine into a chocolate containing wafer which was suitable for buccal or sublingual delivery; especially considering that tolterondine was already known to be transmucosally available. Although Girsh specifically showed an example where aspirin was added into the chocolate-containing composition; it was clear from the Girsh reference that any pharmaceutical agent could have been used, as the object of the Girsh patent was to formulate a hypoallergenic chocolate-containing medicament for sublingual/buccal delivery of active agents.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobsen et al. (US 6,517,864 B1) in view of Girsh (US 5,753,296) in view of Pather et al. (US 6,200, 604 B1).

The teachings of Jacobsen et al. and Girsh were discussed *supra*. Neither reference specifically suggested the incorporation of a buffer such as sodium carbonate.

Pather et al. (US 6,200, 604 B1) disclosed the use of buffers such as sodium carbonate in order to formulate effervescing sublingually administered dosage forms (see Abstract). Specifically, Pather et al. explain that "One aspect of this invention is to use effervescent as penetration enhancers for influencing oral drug absorption. **Effervescent agents can be used alone** or in combination with other penetration enhancers, which leads to an increase in the rate and extent of absorption of an active drug. It is believed that such increase can rise from one or all of the following mechanisms:

(14) 1. reducing the mucosal layer thickness and/or viscosity;

(15) 2. tight junction alteration;

(16) 3. inducing a change in the cell membrane structure; and

(17) 4. increasing the hydrophobic environment within the cellular membrane" (col. 2, lines 16-27, emphasis added).

Pather et al. specifically suggested the use of buffering agents such as sodium carbonate and bicarbonates as the effervescing agent (see, col. 2, lines 41-63).

One of ordinary skill in the art would have been motivated to add a buffer such as sodium carbonate or bicarbonates in order to impart an effervescing property to the sublingual dosage forms which would have advantageously increased the mucosal uptake of tolterodine.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention because cocoa powder containing vehicles were known in the art for the preparations of sublingual/transmucosal delivery of active agents. Further known is that tolterodine was administered transmucosally; that is, sublingually and bucally. It is clear from the prior art that substances such as lecithins, cocoa butter, oils such as soybean oil, sweeteners and flavoring agents are routinely added to confectionary-type carriers containing chocolate/cocoa powder and that these types of carriers enhanced introral uptake of pharmaceutical agents. It was also well known in the art that effervescing agents such as carbonates and bicarbonates increased transmucosal uptake of active ingredients. Further, the addition of known, conventional additives to the composition

does not render the composition patentable, because as stated *supra*, these compounds were routinely used in chocolate containing compositions and do not appear to impart any unexpected results to the composition.

Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references.

No Claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia Leith whose telephone number is (571) 272-0968. The examiner can normally be reached on Monday - Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on (571) 272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patricia Leith
Primary Examiner
Art Unit 1655

November 30, 2006